

TEACH COMMON CORE STANDARDS WITH THE EEI CURRICULUM

Created with your needs in mind, this document shows the correlation between the EEI Curriculum and the California Common Core State Standards. By teaching the EEI unit lessons in your classroom, you will be simultaneously addressing the Common Core standards depicted in this guide.

2.2.c. and 2.2.d.—Alike and Different



In this unit, students explore three woodland species—the ermine, mule deer, and cowbird—to gain an understanding of inherited traits and variation within a population of animals. Students learn how these species have been affected by changes to their habitats. Using a leveled reader, images, and hands-on activities, students master the concepts of inherited traits, variation, and adaptation. To demonstrate how an animal's environment can influence some of its characteristics, students design an animal that uses the adaptation of camouflage. To teach students that variations exist among individuals of a population, a simulation using black and speckled beans demonstrates how traits are inherited.

		RI.2.1	RI.2.2	RI.2.3	RI.2.4	RI.2.7	RI.2.8	RI.2.9	RI.2.10	W.2.8	SL.2.1	SL.2.2	SL.2.3	SL.2.5	SL.2.6	L.2.3	L.2.4
LESSONS	California Connections	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓
	1	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓
	2	✓		✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	✓
	3	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
	4	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
	5	✓		✓	✓	✓				✓	✓	✓	✓		✓	✓	✓
	Traditional Assessment	✓		✓						✓						✓	
		Alternative Assessment	✓		✓					✓						✓	
		COMMON CORE STANDARDS															

Note: For your reference, the list of California Common Core State Standards abbreviations is on the following page.

Using the EEI-Common Core Correlation Matrix

The matrix on the front page identifies a number of Common Core standards that are supported by this EEI unit. However, the check marks in the matrix do not necessarily signify that the Common Core standards checked will be taught to mastery by using this EEI unit alone. Teachers are encouraged to select which Common Core standards they wish to emphasize, rather than teaching to every indicated standard. By spending more time on selected standards, students will move toward greater Common Core proficiency in comprehension, critical thinking and making reasoned arguments from evidence. Teaching this EEI unit will provide opportunities for teachers to implement the shift in instructional practice necessary for full Common Core implementation.

California Common Core State Standards Abbreviations

- **CCCSS:** California Common Core State Standards
- **L:** Language Standards
- **RI:** Reading Standards for Informational Text
- **SL:** Speaking and Listening Standards
- **W:** Writing Standards

Note: Since each Common Core standard includes a breadth of skills, in this correlation, the portion of the standard description that is featured in the Common Core standards applications is cited, using “...” to indicate omitted phrases. For a list of the complete standard descriptions, please see the Common Core Reference Pages located on page 20 of this document.

A Note about Common Core Speaking and Listening Standards

Many of the EEI units provide various learning structures, materials, and groupings that lead toward students working in pairs or small groups to discuss concepts and ideas. This supports the skill in Speaking and Listening Standard 1 “Participate effectively in a range of collaborative discussions (one-on-one, groups...) with diverse partners.” With prior instruction in collaborative discussion techniques, students can be placed in pairs or small groups to discuss the lesson topics. To aid in teacher planning, the lessons are listed below along with their learning structures for whole class, pairs/partners, and/or small groups:

- **Lesson 1:** Whole class
- **Lesson 2:** Whole class
- **Lesson 3:** Whole class, 2 groups
- **Lesson 4:** Whole class, partners
- **Lesson 5:** Whole class

National Geographic Resources

- **Habitats** wall map (Lesson 1)

Unit Assessment Options

Assessments	Common Core Standards and Applications
Traditional Assessment	
Students answer multiple choice questions.	<p>L.2.3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer such questions as <i>who</i>, <i>what</i>, <i>where</i>, <i>when</i>, <i>why</i>, and <i>how</i> to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.</p> <p>W.2.8: Recall information from experiences or gather information from provided sources to answer a question.</p>
Alternative Assessment	
Students look at photographs and circle the characteristics of the animals that are inherited and influenced by the environment. Students then answer questions about the pictures.	<p>L.2.3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer such questions as <i>who</i>, <i>what</i>, <i>where</i>, <i>when</i>, <i>why</i>, and <i>how</i> to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.</p> <p>W.2.8: Recall information from experiences or gather information from provided sources to answer a question.</p>

Lesson 1: Adapted to Woodlands

Students read and discuss **California Connections: Adapted to Woodlands** and list inherited traits for three highlighted species. Students view photographs of animals in and out of their usual habitats and discuss how human activity changes habitats and can influence an organism's survival.



National Geographic Resources

■ Habitats wall map

Use this correlation in place of the **Procedures** on pages 38–39 of the Teacher's Edition.

Procedures	Common Core Standards and Applications
Vocabulary Development	
<p>Use the Dictionary Workbook and vocabulary Word Wall Cards to introduce new words to students as appropriate. These documents are provided separately.</p> <p>Tip: If Dictionary Workbooks need to be reused from year to year, students should not write in them.</p>	<p>L.2.4: Determine...the meaning of unknown...words and phrases based on <i>grade 2 reading and content</i>...</p> <p>e) Use glossaries and beginning dictionaries...to determine or clarify the meaning of words and phrases in all content areas. CA</p> <p>RI.2.4: Determine the meaning of words and phrases in a text...</p>
Step 1	
<p>Call students' attention to the Habitats wall map. Explain that this map shows the location of a variety of habitats across California. Tell students that they are going to hear about one of these habitats and some of the animals that live there.</p> <p>Distribute a copy of California Connections: Adapted to Woodlands reader to each student. Explain to students how people adapt to their environment (<i>wearing more clothes in the winter, wearing hats in the sun</i>), and how animals also adapt to their environment. Ask students, "What do people wear in winter that they do not wear in summer?" (<i>Coats, jackets, sweaters</i>)</p> <p>Read California Connections: Adapted to Woodlands aloud. Have students quietly read along with you. Discuss each picture with the students. (<i>Note: Point to the Sierra Nevada when you discuss the ermine; and Yosemite Valley when reading about the mule deer.</i>)</p>	<p>L.2.3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key details in a text.</p> <p>RI.2.2: Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.</p> <p>RI.2.7: Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.</p> <p>RI.2.10: By the end of year, read and comprehend informational texts, including...science...in the grades 2–3...</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>a) Follow agreed-upon rules for discussions...</p> <p>b) Build on others' talk in conversations by linking their comments to the remarks of others.</p> <p>c) Ask for clarification and further explanation as needed...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p>

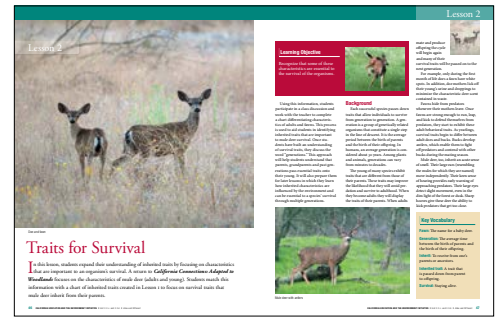
Procedures	Common Core Standards and Applications
Step 2	
<p>Introduce the word “trait” using the vocabulary Word Wall Cards. Share one example of a human trait, such as the color or the shape of their eyes. Ask them, “Can you think of other human traits?” (<i>Skin color; hair type [straight or curly]</i>) Ask students to provide some examples of traits they learned about in California Connections: Adapted to Woodlands. (<i>Ermine have brown fur in summer and white fur in winter; mule deer have long legs and sharp hooves; cowbirds have speckled eggs.</i>) Tell students that they can look in the reader to get some ideas.</p>	<p>L.2.3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>L.2.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases...</p> <p>RI.2.1: Ask and answer such questions as <i>who, what, where, when, why, and how</i>...</p> <p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.4: Determine the meaning of words and phrases in a text...</p> <p>RI.2.8: Describe how reasons support specific points the author makes in a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or...other media.</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p>
Step 3	
<p>Ask students to identify the traits of ermine from California Connections: Adapted to Woodlands. Use the Inherited Traits Chart on the board to list the traits the students identify for the ermine. Repeat this process for mule deer and cowbirds.</p>	<p>L.2.3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer such questions as <i>who, what, where, when, why, and how</i>...</p> <p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or...other media.</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p>

Procedures	Common Core Standards and Applications
Step 4	
<p>Project White Ermine in Snow and After Snowmelt (Visual Aid #1). Discuss what they think will happen to a white ermine against a brown background. Ask, "How might the way ermine hunt—or are hunted by predators—be different?" (<i>Ermine might not be able to hunt as well because prey could see them coming. Predators might see and catch ermine more easily.</i>)</p> <p>Tip: Download and save Visual Aids #1-12 for easy access during the lesson.</p>	<p>L.2.3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer such questions as <i>who, what, where, when, why, and how</i>...</p> <p>RI.2.3: Describe the connection between a series of...scientific ideas...</p> <p>RI.2.7: Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.</p> <p>RI.2.8: Describe how reasons support specific points the author makes in a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>SL.2.3: Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p>
Step 5	
<p>Project Mule Deer Fawn With and Without Grass Cover (Visual Aid #2). Explain that woodlands are being developed into pastures, golf courses, areas with new houses, and other places where female mule deer will find fewer trees and shorter grass to hide their fawns. (<i>Note: If possible, relate these examples to changes that are being made in your local area.</i>) Ask students, "What do you think will happen to fawns with bright white spots in areas with fewer trees or less grass?" (<i>Predators might see and catch fawns more easily than in undisturbed areas.</i>)</p>	<p>L.2.3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.</p> <p>RI.2.7: Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p>

Procedures	Common Core Standards and Applications
Step 6	
<p>Distribute a Student Workbook to each student. Tell students to turn to Inherited Traits (Student Workbook, pages 2–4). Explain to students that they should use the words listed at the top of each section to complete the sentences.</p> <p>Gather California Connections: Adapted to Woodlands readers for use in Lesson 2.</p> <p>Collect Student Workbooks and use Inherited Traits for assessment.</p> <p>Tip: <i>If Student Workbooks need to be reused from year to year, students should not write in them. Some strategies teachers use to preserve the workbooks are:</i></p> <ul style="list-style-type: none"> ■ <i>Have students use binder paper or other lined or unlined paper</i> ■ <i>Have students use a sheet protector over the page and write with a whiteboard marker</i> ■ <i>Do together as a class on a projector or chart paper</i> ■ <i>Project the digital fill-in version and do together as a class</i> ■ <i>Students use digital devices to fill in the digital version found on the website.</i> ■ <i>Make student copies when necessary</i> 	<p>L.2.3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer such questions as <i>who, what, where, when, why, and how...</i></p> <p>W.2.8: Recall information from experiences or gather information from provided sources to answer a question.</p> <p>Suggestion: <i>Before completing the workbook pages, have students re-read the California Connections story with a partner.</i></p> <p>Suggestion: <i>Students who require accommodations may use the workbook as a reference.</i></p>

Lesson 2: Traits for Survival

Students use charted information and photographs to learn about traits that are important to mule deer survival. Class discussions focus on traits of young and adult mule deer; and, students create a chart that identifies survival traits. They use this information to answer questions about survival traits.



Use this correlation in place of the **Procedures** on pages 50–51 of the Teacher's Edition.

Procedures	Common Core Standards and Applications
Vocabulary Development	
Use the Dictionary Workbook and vocabulary Word Wall Cards to introduce new words to students as appropriate.	<p>L.2.4e: Use...beginning dictionaries...to determine or clarify the meaning of words and phrases in all content areas. CA</p> <p>RI.2.4: Determine the meaning of words and phrases in a text...</p>
Step 1	
<p>Point to the word “survival” on the vocabulary Word Wall Cards and explain that “survival” means staying alive.</p> <p>Call students’ attention to the Inherited Traits Chart from Lesson 1. Review mule deer traits. (<i>Big ears, big eyes, long legs, sharp hooves and brown fur, white spots</i>) Remind students that these are inherited traits.</p> <p>Distribute a copy of California Connections: Adapted to Woodlands reader to each student. Reread pages 8–11, pointing out the young fawns and their parents and the traits that help them to survive. Explain that fawns have two parents, a mother (called a doe) and a father (called a buck).</p> <p>Point to the word “generation” on the vocabulary Word Wall Cards and explain that “generation” means the average time between the birth of parents and the birth of their offspring.</p>	<p>L.2.3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>L.2.4: Determine...the meaning of unknown...words and phrases based on <i>grade 2 reading and content</i>...</p> <p>RI.2.4: Determine the meaning of words and phrases in a text...</p> <p>RI.2.10: By the end of year, read and comprehend informational texts, including...science...in the grades 2–3...</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.3: Ask and answer questions about what a speaker says in order to clarify comprehension...</p>
Step 2	
<p>Project Mule Deer Buck (Visual Aid #3). Ask students:</p> <ul style="list-style-type: none"> ■ What color is the buck? (<i>Brown</i>) ■ What traits are the same about the buck on the Visual Aid and the doe on page 8 in California Connections: Adapted to Woodlands? (<i>They both have brown fur, big eyes, big ears and long legs.</i>) ■ What is different? (<i>The buck has antlers. [If students say “horns” are permanent but that these are called antlers and the male deer shed them and grow new antlers each year.]</i>) 	<p>L.2.3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key details in a text.</p> <p>RI.2.7: Explain how specific images...contribute to and clarify a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p>

Procedures	Common Core Standards and Applications
Step 3	
<p>Post the Mule Deer Survival Traits Chart. Redistribute the students' individual Student Workbooks. Tell them to turn to Mule Deer Survival Traits (Student Workbook, pages 5–6). Explain that as they discuss the inherited traits that help mule deer fawns and adults to survive you will record their answers on the Mule Deer Survival Traits Chart on the board. Have students copy the words on their copy of the Mule Deer Survival Traits. Ask students:</p> <ul style="list-style-type: none"> ■ How are bucks' antlers used? (<i>Bucks use antlers to fight off predators, such as coyotes, wolves, and dogs. They also fight off other bucks in order to find a mate and reproduce.</i>) ■ Why are bucks' antlers important to the bucks? (<i>They help the bucks survive.</i>) <p>Record "antlers" in the "Survival Traits: Adult Deer" column. Remind students to copy the words into the same places on their copy of Mule Deer Survival Traits.</p>	<p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between...scientific ideas...</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text...</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p> <p>W.2.8: Recall information from experiences...</p>
Step 4	
<p>Based on reading California Connections: Adapted to Woodlands, discuss the other inherited traits that help mule deer fawns and the adults survive. Ask students:</p> <ul style="list-style-type: none"> ■ Which inherited survival traits are only seen in adult deer? (<i>Antlers, brown fur, long legs</i>) Record these in the "Survival Traits: Adult Deer" column. ■ Which survival trait is seen only in fawns? (<i>White spots</i>) Record in the "Survival Traits: Fawn" column. ■ Which inherited survival traits do they have in common? (<i>Big ears, big eyes, brown fur, sharp hooves</i>) List these last four survival traits in both columns. ■ How does each inherited trait help the adult and fawn mule deer to survive? Record this information in the "How it Helps" column. <p>Remind students to record the responses on their copy of Mule Deer Survival Traits in the Student Workbook.</p>	<p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between...scientific ideas...</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text...</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p> <p>W.2.8: Recall information from experiences...</p>
Step 5	
<p>Tell students to answer the questions on page 2 of Mule Deer Survival Traits. When students have finished, ask each of them to state a "clarifying question" about mule deer. Tell them that their questions should start with a word like, "Why," "How," "When," "Where," or "What if." (<i>For example, "Why are the spots on fawns white?"</i>) Write the students questions on the board or a piece of chart paper.</p> <p>Gather California Connections: Adapted to Woodlands readers and keep for use in Lesson 5.</p> <p>Collect Student Workbooks and use Mule Deer Survival Traits for assessment.</p>	<p>L.2.3: Use knowledge of language...when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between...scientific ideas...</p> <p>SL.2.2: Recount or describe key ideas or details from a text...</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p> <p>W.2.8: Recall information from experiences...</p>

Lesson 3: Animals That Blend with Their Background

Students compare photographs of ermine and mule deer fawns against similar and different-colored backgrounds and discuss how traits may influence an animal's survival depending on its habitat. In groups, they use camouflage techniques to hide and locate student-created animals in a winter or summer woodland habitat.



Use this correlation in place of the **Procedures** on pages 60–61 of the Teacher's Edition.

Procedures	Common Core Standards and Applications
Vocabulary Development	
Use the Dictionary Workbook and vocabulary Word Wall Cards to introduce new words to students as appropriate.	<p>L.2.4e: Use...beginning dictionaries...to determine or clarify the meaning of words and phrases in all content areas. CA</p> <p>RI.2.4: Determine the meaning of words and phrases in a text...</p>
Step 1	
<p>Point to the first new Key Vocabulary word, “environment,” and read it and its definition. Sweep your arm around the classroom, and tell students this is their classroom environment; they also have a home environment. Likewise, a plant’s or animal’s surroundings make up its environment.</p> <p>Point to and read the next word, “molt,” and give its definition. Explain that ermine molt their brown coats so that their white winter coats can grow in, then molt again when spring comes.</p> <p>Point to and read the last word, “reproduction,” and give its definition. Explain that all plants and animals reproduce to create young of their own kind, for example, mule deer produce baby mule deer called fawns.</p>	<p>L.2.3: Use knowledge of language...when writing, speaking, reading, or listening.</p> <p>RI.2.4: Determine the meaning of words and phrases in a text...</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p>
Step 2	
<p>Project Brown Ermine in Woodland and White Ermine in Snow and After Snowmelt (Visual Aids #4 and 1).</p> <p>Discuss how individual ermine that survive both summer and winter cycles of the year in their environment are most likely to produce offspring the following spring. Their adaptation—the ability to molt and change coat color at the time the snow cover changes—is a trait they can pass on to their offspring.</p>	<p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.7: Explain how specific images...contribute to and clarify a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p>

Procedures	Common Core Standards and Applications
Step 3	
<p>Project Mule Deer Fawn With and Without Grass Cover (Visual Aid #2).</p> <p>Tell students that the fawns who survived their early, helpless stage to reproduce were more often the spotted ones. The trait for being spotted was passed on to future generations because the spotted fawns seemed to live longer and reproduce more often.</p> <p>Ask students what they notice about the white spots in Mule Deer Fawn With and Without Grass Cover. Establish that the spots stand out in an area with fewer trees or less grass, and that the spots might attract the attention of predators to the fawn.</p>	<p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.7: Explain how specific images...contribute to and clarify a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p>
Step 4	
<p>Call students' attention to the Woodlands in Summer poster. Ask them to talk about the predominant colors (green and brown) in the summer woodland.</p> <p>Call students' attention to the Woodlands in Winter poster. Ask them to talk about the predominance of white in the winter woodland.</p>	<p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.7: Explain how specific images...contribute to and clarify a text.</p> <p>RI.2.8: Describe how reasons support specific points the author makes in a text.</p> <p>RI.2.9: Compare and contrast the most important points presented by two texts on the same topic.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p>
Step 5	
<p>Divide the class in half. Distribute sheets of white, green, and brown construction paper and crayons or colored pencils.</p> <p>Tell students that they are going to have a "Camouflage Contest." Explain that each student is to design an animal that will blend into part of one of the large woodland scenes. Assign one group to the summer woodland and one group to the winter woodland. Direct students to choose the part of the poster they want their animal to blend into (for example, in a tree, under a tree, on the ground, in underbrush, in a hollow log).</p> <p>Have students draw the animal's shape in pencil on one of the pieces of paper and cut out the shape. The shape can be that of a known or imaginary animal. The drawing should be no larger than two inches tall or wide. Let students discuss their options and choices as they work. Next, tell them to color spots, stripes, or other patterns onto their animal. (<i>Note: Allow 10 minutes for this process.</i>)</p>	<p>L.2.3: Use knowledge of language...when writing, speaking, reading, or listening.</p> <p>RI.2.7: Explain how specific images...contribute to and clarify a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>SL.2.5: ...add drawings or other visual displays to stories...to clarify ideas, thoughts, and feelings.</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p>

Procedures	Common Core Standards and Applications
Step 6	
<p>Tell one group to rest their heads on their desks. These students will be the “predators,” searching for the hidden animals. Direct the students in the remaining group to tape their animals onto their target spots on the poster. Have “predators” raise their heads. Call on each “predator” to quickly say where they see one animal. Remove the animals as they are identified.</p> <p>Identify the last animal to be detected and declare the student designer the winner of the round. Tell the students that their creatures’ protective coloring trait did what it was supposed to do—protect the animal from being detected.</p> <p>Repeat the process with the other poster, using new “predators” from the other group to search for new hidden animals.</p>	<p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.5: ...add drawings or other visual displays to stories...to clarify ideas, thoughts, and feelings.</p>
Step 7	
<p>Redistribute the students’ individual Student Workbooks. Tell them to turn to Traits for Fitting into an Environment (Student Workbook, page 7). Instruct students to answer the questions in their own words and in one or two complete sentences.</p> <p>Collect Student Workbooks and use Traits for Fitting into an Environment for assessment.</p>	<p>L.2.3: Use knowledge of language...when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>W.2.8: Recall information from experiences...</p>

Lesson 4: Alike but Different

Using photographs, students analyze differences in a breed of dogs. They participate in a simulation of how traits are inherited and why animals can look different, even with the same parents. They look also at variations in eye color and height among themselves.



Use this correlation in place of the **Procedures** on pages 70–71 of the Teacher’s Edition.

Procedures	Common Core Standards and Applications
Vocabulary Development	
Use the Dictionary Workbook and vocabulary Word Wall Cards to introduce new words to students as appropriate.	<p>L.2.4e: Use...beginning dictionaries...to determine or clarify the meaning of words and phrases in all content areas. CA</p> <p>RI.2.4: Determine the meaning of words and phrases in a text...</p>
Step 1	
<p>Point to the first two Key Vocabulary words, “population” and “species,” on the wall and read the definitions. Tell students that they are part of a population, and describe the population of the classroom or a city, state, or country. Provide examples of animal populations, such as the mule deer in Yosemite Valley or ermine in the Sierra Nevada.</p> <p>Point to the last vocabulary word, “variation,” and read its definition. Tell students that in this lesson they will be looking at variations in animal species and populations.</p>	<p>L.2.3: Use knowledge of language...when writing, speaking, reading, or listening.</p> <p>RI.2.4: Determine the meaning of words and phrases in a text...</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p>
Step 2	
Project Color Variation in Cocker Spaniels (Visual Aid #5). Call on students to read the text on the visual aid.	RI.2.10: By the end of year, read and comprehend informational texts including...science...in the grades 2–3...
Step 3	
Ask students to suggest inherited traits that are alike for all of these spaniels. Make a list on the board of these traits. (<i>Long, floppy ears; long, curly hair; and short tail</i>) Then ask, “Do they have any inherited traits that are different?” (<i>Yes, the main difference will be that some of the dogs are one solid color and some have patches of two colors.</i>) List this trait, as well as any others the students notice. Point out that the list of like traits is the longest because all the dogs in the photo belong to the same breed. Explain that, even in populations that are very similar, variations occur.	<p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.9: Compare and contrast the most important points presented by two texts on the same topic.</p> <p>SL.2.1: Participate in collaborative conversations...</p>

Procedures	Common Core Standards and Applications
Step 4	
<p>Explain that offspring inherit traits from their parents, but they are not exact copies of their parents.</p> <p>Project Spaniels with Solid Color or Patches: Page 1 (Visual Aid #6). As you point to and discuss each photograph, tell students that individuals inherit part of every trait from each parent. If the two parts are different, one part “wins out” over the other. Compare it to two people talking at the same time; if one shouts and one whispers, which one will you hear?</p> <p>Project Spaniels with Solid Color or Patches: Page 2 (Visual Aid #7). As you point to and discuss each photograph, remind students that individuals inherit part of every trait from each parent.</p> <p>Read the labels on the visual aids and answer questions as they arise until students appear to understand the possible combinations of solid black offspring and black and white offspring in two generations.</p>	<p>L.2.3: Use knowledge of language...when writing, speaking, reading, or listening.</p> <p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.9: Compare and contrast the most important points presented by two texts on the same topic.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>Suggestion: <i>After the discussion have students summarize the main idea and supporting details with partners. Use sentence frames if needed.</i></p>
Step 5	
<p>Tell students the next activity will show why offspring show some traits and not others, for example, hair color and ear size. Tell them they will be finding out what 20 puppies from two cocker spaniel parents will look like. They will be finding out if the puppies will have solid-colored fur or if their fur will have patches of colors.</p> <p>Have students sit in pairs. Give each pair two solid-colored beans, two speckled beans, a paper bag, and a pencil. Redistribute the students’ individual Student Workbooks. Tell them to turn to Counting Beans (Student Workbook, pages 8–9). Explain that the solid-colored beans represent the solid-color trait, and the speckled beans represent the patches or mixed-color trait. Pick two beans from a bag. Tell students that this is like picking one trait from the father dog and one trait from the mother dog. Project Counting Beans (Visual Aid #8) to show students how to correctly record the bean draw on the Counting Beans tally sheet. Be sure to tell them that they should make only one check mark on each line, even though there are three columns to choose from.</p> <p>Have students put one solid-colored and one speckled bean into the bag; tell them this is like a solid-color spaniel mother with one solid-color trait and one trait for patches or a mixed-color trait. Then, have them put the second solid-colored bean and speckled bean into the bag; tell them this is like a solid-color spaniel father that also has both traits.</p> <p>Have students pick out two beans from the bag. Direct them to record their bean draw on Counting Beans. Put beans back into bag after each recording. Monitor students to be sure they are following instructions. Demonstrate another draw from your bag, and show the class how you record it on the second line of Counting Beans. Again, monitor students as they record their second draw. Continue to demonstrate the bean draws and recordings, and monitor student work as long as necessary.</p>	<p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.7: Explain how specific images...contribute to and clarify a text.</p> <p>RI.2.8: Describe how reasons support specific points the author makes in a text.</p> <p>RI.2.9: Compare and contrast the most important points presented by two texts on the same topic.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p>

Procedures	Common Core Standards and Applications
Step 5 (Continued):	
Review Counting Beans , explaining how to record each pick from the bag. Instruct students to draw pairs of beans and complete Counting Beans . (Note: An Answer Key and Sample Answers for Counting Beans are provided on pages 74–75. Students' answers will vary from the samples provided.)	See previous page for the standards and suggestions.
Step 6	
<p>Have students count up the number of checkmarks they have in their "Two Solid Color" column. Record these findings on the visual aid. Next, have students total the number of checkmarks they have in their "One Solid, One Speckled" column, and record these findings on the visual aid. Finally, have students total the number of checkmarks they have in their "Two Speckled" column, and record these findings on the Counting Beans visual aid.</p> <p>Explain that a "Two Solid Color" draw means the puppy will be a solid color. Explain that "One Solid, One Speckled" also means that the puppy will be a solid color. Add these two numbers together to find how many solid-color puppies there will be. Ask students to add their numbers together, too, so they can see how many of their puppies will be solid-colored. Now explain that "Two speckled" beans means that the puppy's fur will have patches.</p> <p>Following this discussion, have students answer the questions on page 2 of Counting Beans. Review students' work and correct any misunderstandings.</p>	<p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.7: Explain how specific images...contribute to and clarify a text.</p> <p>RI.2.9: Compare and contrast the most important points presented by two texts on the same topic.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>W.2.8: Recall information from experiences or gather information from provided sources to answer a question.</p>
Step 7	
Tell students you are going to sort the class based on variations people have, but do not tell the students what variation you have chosen. In the order they are sitting, point to each student and tell him or her to go either to the left side of the room or to the right side. You can choose a variation according to the composition of your class. For example, you might use blue eyes or no blue eyes (even if most of the class ends up on one side of the room). Ask students to guess what variation you used to sort them. If no one guesses, tell students the variation you used.	<p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p>
Step 8	
Tell students that height is a common variation in a population. Have students line up in height order. Then, have the tallest and shortest students stand next to each other in front of the class. Tell them that the difference between the tallest and shortest students is the variation of height in your class.	SL.2.1: Participate in collaborative conversations...

Procedures	Common Core Standards and Applications
Step 9	
<p>Tell students to turn to Variations in Other Populations (Student Workbook, page 10). Project Variations in Populations (Visual Aid #9) and tell them to look at each set of photographs and answer the questions in the Student Workbook. Tell them they can answer with one word or a few words.</p> <p>When students have finished, ask each of them to state a “clarifying question” about variations in populations. Tell them that their questions should start with words like, “Why,” “How,” “When,” “Where,” or “What if.” (For example, “<i>How do populations of fish vary in size?</i>”) Write the students questions on the board or a piece of chart paper.</p> <p>Collect Student Workbooks and use Variations in Other Populations for assessment.</p>	<p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text...</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p> <p>W.2.8: Recall information from experiences...</p>

Lesson 5: Habitat Change and Variations Within Populations

Students discuss how humans affect riparian habitats. They view photographs, play a game, and talk about how host species treat cowbird eggs. They discuss how some birds have inherited a trait that causes them to care for only their own young.



Use this correlation in place of the **Procedures** on pages 86–87 of the Teacher's Edition.

Procedures	Common Core Standards and Applications
Vocabulary Development	
Use the Dictionary Workbook and vocabulary Word Wall Cards to introduce new words to students as appropriate.	<p>L.2.4e: Use...beginning dictionaries...to determine or clarify the meaning of words...</p> <p>RI.2.4: Determine the meaning of words and phrases in a text...</p>
Step 1	
<p>Remind students that they have been studying about characteristics or traits that animals inherit from their parents, such as their size or the color of their coat. These characteristics are common to an entire species.</p> <p>Explain that sometimes when something in an environment changes, for example if trees are cut down or a food source is reduced, some individuals in a population may change their behavior as a means of surviving in the new situation. Such changes give them a better chance to survive and reproduce. Over time, changes and variations, can be passed on to other generations.</p>	<p>SL.2.1: Participate in collaborative conversations...</p>
Step 2	
<p>Project Healthy Riparian Habitat (Visual Aid #10). Explain to students that “riparian” describes an area on or near the banks of rivers and streams. Point out the river bank, the shrubs and the woodland. Project Disturbed Riparian Habitat (Visual Aid #11). Ask the following questions:</p> <ul style="list-style-type: none"> ■ How are these two habitats different?" (<i>The riverbank in the disturbed habitat has few plants and there are fewer trees there.</i>) ■ Do you think that there were more birds in the first riparian habitat photograph or the second? Why? (<i>The first because there were more trees where the birds could rest.</i>) 	<p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.7: Explain how specific images...contribute to and clarify a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or...through other media.</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p>
Step 3	
<p>Draw students' attention to the Cowbird, Least Bell's Vireo, and Red-winged Blackbird (Information Cards #1–3). Identify each bird and tell students that each of these types of birds live in or near riparian woodlands.</p>	<p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p>

Procedures	Common Core Standards and Applications
Step 4	
<p>Project How Red-winged Blackbirds Treat Cowbird Eggs (Visual Aid #12). Remind students that red-winged blackbirds also live in riparian woodlands. Tell students that cowbirds also lay their eggs in red-winged blackbird nests.</p> <p>Read to students the text of the visual aid. Use the following questions to focus a discussion on a trait that some red-winged blackbirds inherit that will help more red-winged blackbirds survive to raise their own young.</p> <ul style="list-style-type: none"> ■ How are cowbird eggs and red-winged blackbird eggs the same? (<i>They are about the same size, and both have speckles.</i>) ■ How are they different? (<i>Red-winged blackbird eggs are a bluish color.</i>) ■ Do all red-winged blackbirds accept the cowbird eggs and raise the hatchling? (<i>No, but most red-winged blackbirds accept the cowbird eggs.</i>) ■ What variation do some red-winged blackbirds inherit that can help more of their young survive? (<i>Some do not accept the cowbird eggs. They push them out of the nest.</i>) ■ Why would this variation be important to red-winged blackbird populations? (<i>It leaves more food for their hatchlings. More red-winged blackbirds can survive and reproduce.</i>) 	<p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.7: Explain how specific images...contribute to and clarify a text.</p> <p>SL.2.1: Participate in collaborative conversations...</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or...through other media.</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p> <p>Suggestion: When answering questions have students identify the text or visual that supports their answers.</p>
Step 5	
<p>Draw students' attention again to the Cowbird and Least Bell's Vireo information cards. Point to the least Bell's vireo and remind students that when the birds' habitat is changed, fewer vireos build nests and raise young. Mention that when this happens, the population of least Bell's vireo decreases.</p> <p>Point to the Cowbird information card and remind students that the population of least Bell's vireo has another problem—the cowbird. Explain that the cowbird has an advantage: their hatchlings are raised by the least Bell's vireo and sometimes the cowbird hatchlings survive and the baby vireos do not. Point out that this is one of the reasons that the population of least Bell's vireo has decreased in California.</p> <p>Now draw students' attention to the Red-winged Blackbird information card on the board. Remind students that some individuals within the red-winged blackbird population inherit a variation; they refuse to host or care for cowbird eggs. Explain that if several generations of red-winged blackbirds inherit this trait, this variation may make a difference in terms of making the red-winged blackbird population better able to survive an environmental change.</p>	<p>L.2.3: Use knowledge of language...when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>RI.2.3: Describe the connection between...scientific ideas...in a text.</p> <p>RI.2.7: Explain how specific images...contribute to and clarify a text.</p> <p>SL.2.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p> <p>SL.2.3: Ask and answer questions about what a speaker says...</p> <p>SL.2.6: Produce complete sentences when appropriate to task and situation...</p>

Procedures	Common Core Standards and Applications
Step 6	
<p>Redistribute the students' individual Student Workbooks. Tell them to turn to Taking Care of Our Own (Student Workbook, pages 11–12). Review the questions with the students.</p> <p>Gather California Connections: Adapted to Woodlands.</p> <p>Collect Student Workbooks and use Taking Care of Our Own for assessment.</p>	<p>L.2.3: Use knowledge of language...when writing, speaking, reading, or listening.</p> <p>RI.2.1: Ask and answer...questions...to demonstrate understanding of key details in a text.</p> <p>W.2.8: Recall information from experiences...</p>

Unit Assessment

Refer to the introduction pages at the front of this document for information regarding the Traditional and Alternative Assessments for this unit and their common core correlations.

California Common Core State Standards Descriptions

Language Standards

- **L.2.3:** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.2.4:** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 2 reading and content*, choosing flexibly from an array of strategies.
 - e) Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases **in all content areas. CA**

Reading Standards for Informational Text

- **RI.2.1:** Ask and answer such questions as *who, what, where, when, why, and how* to demonstrate understanding of key details in a text.
- **RI.2.2:** Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
- **RI.2.3:** Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
- **RI.2.4:** Determine the meaning of words and phrases in a text relevant to a *grade 2 topic or subject area*. **(See grade 2 Language standards 4–6 for additional expectations.) CA**
- **RI.2.7:** Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
- **RI.2.8:** Describe how reasons support specific points the author makes in a text.
- **RI.2.9:** Compare and contrast the most important points presented by two texts on the same topic.
- **RI.2.10:** By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Speaking and Listening Standards

- **SL.2.1:** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.
 - a) Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
 - b) Build on others' talk in conversations by linking their comments to the remarks of others.
 - c) Ask for clarification and further explanation as needed about the topics and texts under discussion.
- **SL.2.2:** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- **SL.2.3:** Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
- **SL.2.5:** Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.
- **SL.2.6:** Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 2 Language standards 1 and 3 for specific expectations.)

Writing Standards

- **W.2.8:** Recall information from experiences or gather information from provided sources to answer a question.